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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,809	04/07/2005	Robert George Dunster	14036.50USWO	6212

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MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

BOECKMANN, JASON J

ART UNIT	PAPER NUMBER
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3752

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/508,809	DUNSTER ET AL.	
	Examiner	Art Unit	
	Jason J. Boeckmann	3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5,7,9,12-14,17-19,21,22 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5,7,9,12-14,17-19,21,22 and 24-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/6/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4, 13, 14, 18 and 25-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Zuev et al (6,223,827).

Zuev et al shows a fire explosion suppression system, comprising: a source of pressurized liquid (1), water (column 2, line 48), a source of pressurized gas (2), a mist producing means (12) connected to receive a flow of the liquid to produce a mist, mixing means (4) for mixing the mist into a flow of pressurized gas, to produce a discharge in the form of a two phase mixture comprising a suspension of droplets of the mist in the pressurized gas, and a control means (3) for controlling the ratio of mass flow rate of the liquid to the pressurized gas to a constant value, wherein the pressurized gas is pressurized by being stored under pressure (column 3, line 7) which reduces during the flow thereof and reduces the mass flow rate of the gas (when the pressure of the container 2 gets below the desired 5 bar), and in which the control means includes means for applying the pressure of the stored gas to pressurize the liquid (17), whereby reducing the applied pressure correspondingly reduces the mass flow rate of the liquid.

Regarding claim 18, the use of the apparatus of Zuev et al inherently performs the methods and steps of the claim.

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Regarding claim 27, the control means is pre programmed with values (column 3, second paragraph).

Regarding claims 28 and 29, the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113).

Claims 3-5, 7, 9, 12-14, 17-19, 21, 22 and 24-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Dorkin et al (WO99/52643) using USPN 6,478,240 for reference.

Dorkin et al shows a fire explosion suppression system, comprising: a source of pressurized liquid (16), water (column 5, line 51), a source of pressurized gas (15), a mist producing means (3) connected to receive a flow of the liquid to produce a mist, mixing means (2) for mixing the mist into a flow of pressurized gas, to produce a discharge in the form of a two phase mixture comprising a suspension of droplets of the mist in the pressurized gas, and a control means (pipe 17, valves 19, 20, and the device controlled valve 5, 6 and 7) for controlling the ratio of mass flow rate of the liquid to the pressurized gas to a constant value, wherein the control means includes a controllable valve for adjusting the mass flow rate of the liquid agent during discharge.

Regarding claims 3 and 9, the control means includes a means for applying the pressure of the stored gas to pressurize the liquid (17).

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Regarding claim 7, the valve means comprises a controllable metering valve (20) for adjusting the valve in dependence of the mass flow rate of the gas.

Regarding claim 12, the liquid extinguishing agent flow is initiated before the gas flow (column 7, lines 40-45).

Regarding claims 17-19, 21, 22 and 24-29, the use of the apparatus of Dorkin et al inherently performs the steps and methods of the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorkin et al (WO99/52643) using USPN 6,478,240 for reference, in view of Russwurn et al (6,173,790).

Dorkin et al shows all aspects of the applicant's invention as in claims 1 and 15, but does not specifically disclose that the pressurized gas is inert gas. However, Russwurn et al shows a fire-extinguishing device including pressurized gas that is inert and a liquid fire-extinguishing agent that is water. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention, under the teachings of Russwurn et al, to use inert gas in the fire suppression system of Dorkin et al, in order to extinguish a fire more quickly.

Response to Arguments

Applicant's arguments with respect to claims 3, 5, 7, 9, 12, 17, 19-22 and 24, have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments regarding claims 4, 13, 14, 18 and 25-29 have been fully considered but they are not persuasive. It is noted, that if the gas in the compressed gas bottle drops below the desired 6 bar, then the pressure leaving the compressed gas bottle will reduce during the flow thereof and consequently will reduce the pressure of the liquid agent.

Regarding claims 27-29, the pressure regulator 3 inherently includes the pre-programmed value of 6 bar as discussed above.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason J. Boeckmann whose telephone number is (571) 272-2708. The examiner can normally be reached on 7:30 - 5:00 m-f, first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJB JJB 1/24/07


KEVIN SHAVER
SUPERVISORY PATENT EXAMINER
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